DDO

81-0981

25X1

·ñ 5 MAY 1981   25X1

ODP # 81-629

MEMORANDUM FOR: Deputy Director for Administration

THROUGH: Acting Deputy Director for Operations

                  Comptroller

25X1   FROM:

                  Chief, Information Management Staff

25X1   SUBJECT: DDO Field Operational/Information Security
                  Program

1.   For the past several years the Directorate of Operations has been actively working on a program to improve information security at the DO field facilities. Included in this program have been actions to reduce information holdings in the field, convert paper indices and regulations to microfiche, install better destruction capabilities, and improve information handling procedures. All of these measures have been effective in enhancing information security in the field and in forming the foundation for the capstone of the program - the automated "paperless office". The (almost) paperless office will permit the establishment of rigorous controls over information flow. It will improve protection against the loss of classified information to hostile forces in crisis situations, because electronic files can be more rapidly destroyed in an emergency. In addition to enhancing information security, the almost paperless office will result in increased efficiency and effectiveness at DO field facilities. The labor intensive functions of document preparation, handling, reproduction, filing, and distribution will be electronically supported and thus easier to perform and less time consuming. Similarly, the retrieval of information will be faster and the presentation of information will be in a form tailored to specific field station needs.   25X1

2.   We have been pursuing this program, called CRAFT, since 1977. Requirement definition studies have been conducted; installation, maintenance, and operations planning have been initiated;   25X1 development and implementation of four testbed systems

25X1   , has been 25X1

effected; and hardware and software systems have been evaluated and analyzed in order to stay abreast of technological advancements. (CRAFT will use off-the-shelf equipment to avoid long, resource-   25X1 consuming and expensive R&D efforts.)   25X1

3.   Our requirements definition studies and experience with the testbed systems have resulted in the identification of functional requirements in five categories.

A.   Full Text Document Electronic Storage and Retrieval

To provide better information control and facilitate the rapid destruction of field information holdings in the paperless office environment, a capability must be provided to support the electronic storage, retrieval, and display of incoming and outgoing documents. The document storage process must provide for initial document review; entry of intra-Station routing information, action indicators and general comments; generation of indexing information; and the filing of the document into one or more files. The filing system must support multiple files which are logically and physically separate. For files that are separated only logically, the system will store only a single copy of the document, but the document must appear to the user to be contained in each uniquely named file to which the document is indexed. Automatic and user-initiated document purge by file and by system must be provided. Document purge will also include appropriate document-index updates. The document retrieval process must facilitate retrieval by document number, addressee, subject, date, and/or substance (key word, key phrase, etc.). Further, a scrolling capability must be provided for file browsing.

B.   Electronic Mail Distribution

The system must provide the capability for the electronic routing of documents to and from the central storage facility under the control of the master terminal. The system must also support distribution of documents to multiple addresses and include a broadcast capability. For security reasons distribution must be on an end-user demand basis. Workstation-to-workstation communication (via the central storage facility) must also be provided.

C.   Word Processing

This capability is needed to provide a mechanism for source data automation of the documents prepared at the field facility. The specific features that must be supported are:

(1)   Page - Forward or backward movement through a file of text, one screen at a time.

SECRET

(2) Scroll - Forward or backward movement through a file of text, one line at a time.

(3) Insert - Inserting text in an existing line; preexisting text will be separated in the designated position to make room.

(4) Change - Overtyping existing text with new characters.

(5) Delete - Eliminating characters, words, lines.

(6) Move - Relocate or copy a defined block of text from one location to another within the file.

(7) Line-Number - The ability to number lines.

(8) Print or Display Formatting - A file or a full screen of text may be displayed or printed. Formatting for files will consist of defining editor formats (e.g., lines-per-page, double-space, margin sizes, right-justification, etc.), if desired.

D. Data Processing

25X1
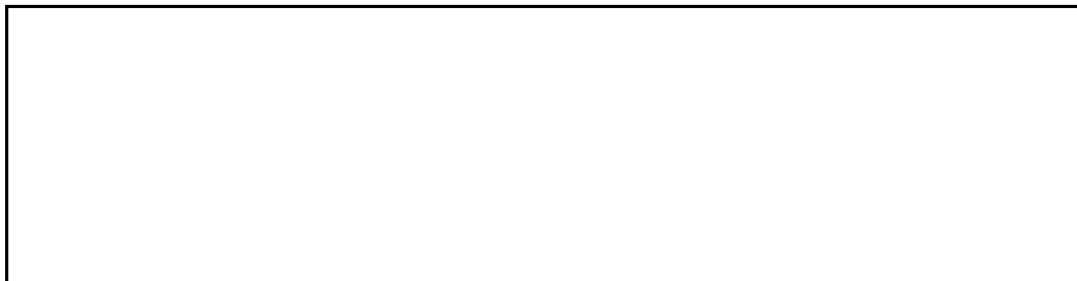
E. Communications Interface

To close the loop on the paperless office, a mechanism is required that will facilitate the processing of incoming and outgoing message traffic in electronic form between the Station communications center and the information handling system. This interface must of necessity be either electrical or media (floppy disks, paper tape, etc.) in nature.

25X1

4. To comply with existing Agency policy as well as to meet program objectives and field station requirements, the selected system must have the following characteristics and features. (A summary of system requirements is provided at Annex A.)

- Fully NACSEM 5100 (TEMPEST) certified to protect against the emanation of compromising signals.

- A high degree of reliability to ensure that the MTBF coupled with on-site redundant hardware and spare parts and area float equipment will result in a 99.9% system availability. (NOTE: Office of Communication will provide on-site and depot maintenance support. Contractor involvement will be limited to repair and return of plug board components and major end-item equipment that has experienced catastrophic failure.)

- The system must be compact and modular to permit installation in minimal space available in the DO field facilities and to allow for growth as requirements expand.

- The system must be secure. At a minimum, the system and file access must be under password control and data compartmentation must be supported; a system activity log must be maintained; non-removable memory must be volatile; magnetic disk units must be removable and easily degaussable (this eliminates the "sealed" disk unit technology); and an emergency disk destruction capability must be provided.

- For maintenance, spares, software, and operating supply efficiencies, standard, single family systems are required.

- The system must be "user-friendly" since the majority of field personnel will not be technically oriented.

- The system must be programmable to support the specific field processing requirements outlined in the previous paragraph.

25X1

5. As part of the project planning effort, IMS has been reviewing, analyzing, and testing various hardware configurations to determine the feasibility of obtaining an off-the-shelf system to support the project requirements. In the testbeds, VYDEC, Honeywell, and Delta Data products have been employed, and hands-on testing of the WANG, Lexitron, and Lanier product lines has been performed. None of these systems has been totally responsive to the requirements. As can be seen from the attached market survey (Annex B), there is no single manufacturer that is yet capable of meeting all of the project needs.

25X1

Next 1 Page(s) In Document Exempt

CIA Field Automation Requirements

I.   GENERAL

All configurations used in support of the Agency's overseas automation project must

1.   employ standard, single line hardware components and application software systems;

2.   be modular;

3.   be user friendly with menus and prompts to assist the non-ADP professional field officer in the use of the system;

4.   be compatible with Headquarters based computer systems to facilitate interaction and data exchange between the field and Headquarters;

5.   employ a work station that will function with either the field or Headquarters configurations.

II.   FUNCTIONAL SUPPORT REQUIREMENTS

A.   Word Processing

1.   Text edit functions to include insert, delete, move, copy, justify (by keystroke) characters, words, lines, paragraphs, and sections.

2.   Input, edit, and output by document (not page), including pagination without user entered form feeds.

3.   Search for and change character strings throughout a document or file of documents.

4.   Pre-defined formatted screens for input.

5.   Programmable function keys to allow short keystroke use of common text and functions.

S E C R E T

B. Document Storage and Retrieval

1. Logical storage of documents in one or more files.

2. Retrievable by multiple, user specified, sections of the document.

3. Boolean logic capability for document retrieval.

4. Manipulation of incoming, outgoing, and stored documents.

5. Forward and backward paging through a retrieved document.

6. Deletion of multiple number of documents by criteria such as document date.

7. Document annotation.

C. Electronic Mail

1. Creation and editing of permanent distribution lists.

2. Automatic index of incoming queue for review by receiver.

3. Automatic confirmation of receipt.

4. Logical distribution of documents into user queues.

5. Schedulable automatic distribution to user.

6. Non-scheduled priority distribution at operator request.

7. Multi-point document distribution.

D. Data Management System

1. Formatted screen to support data input and output.

SECRET

2. Query language with Boolean logic including a "contains" verb for character by character search.

3. Data validation, including table lookup, during input.

4. Exec language that allows individual tailoring of system functions.

5. Flexible report generation

E. Data Processing

1. Security system that provides read and write password protection on all functions, documents, and files.

2. Multi-Key ascending and descending sort.

3. File and volume utilities which provide create, delete, rename, and list functions.

4. High level programming language which allows manipulation of all file types on the system.

5. Workstation to workstation message communication.

F. Comprehensive system security capability to support requirements set forth in the "Security Requirements for Automated Information Systems located in Overseas Installations."

III SYSTEM REQUIREMENTS

A. General

1. All System components TEMPEST certified.

2. Size, sound, and power compatible with the office environment.

3. Hardware architecture to facilitate least replaceable unit (LRU) maintenance.

5. Operate on either 50 or 60 cycle power, between 110-220 volts.

6. Operate between 50 to 90 degrees Fahrenheit at 20 to 80% relative humidity.

7. Workstations

   a. Screen display size - 80x24, horizontal scroll to 132.

   b. Screen display buffer - 8k bytes.

   c. Locally programmable - 128k bytes or automatic paging.

   d. Software trap and test on all keys.

   e. Functions keys that can be loaded under program control.

   f. Numeric key pad and cursor control keys.

   g. Telecommunications options to allow use as an interactive terminal with remote host.

   h. Multiple ports for connections with disk drives and printers.

   i. Alternate character sets.

   j. Support software required to implement all systems outlined in the functional requirements.

8. Disk/Diskette Storage

   a. Removable media.

   b. Media of common design to allow multiple suppliers.

   c. Sharable by more than one processor or workstation.

   d. Nonsealed disk packs.

9. Printer

  a. Impact type printing.

  b. Letter quality output on bond paper.

  c. Multiple fonts to include OCR-A and foreign alphabets.

  d. Printing speed of at least 40 CPS.

  e. Single sheet or form feed.

  f. Print width of 132 characters.

10. Central Processor

  a. Main memory sufficient to support multiprogramming of functional software and up to 24 simultaneous users.

  b. Able to support software required to implement all systems outlined in the functional support requirements.

B. Small Configuration

  1. Disk Drives - sharable by all workstations. Multiple drives per configuration required for redundancy. Online capacity up to 80 MB each.

  2. Printer - Two devices sharable by all workstations.

  3. Workstations - 2 to 6.

C. Medium Configuration

  1. Disk Drives - sharable by all workstations. Multiple devices per configuration required for redundancy. Online capacity up to 160 MB each.

  2. Printer - 2 to 3 sharable by all workstations.

  3. Workstations - 7 to 12.

- 5-

SECRET

D. Large Configuration

    1. Disk Drives - sharable by all workstations. Multiple devices per configuration to provide redundancy. Online capacity up to 600 MB.

    B. Printer - up to 4 shared among workstations.

    C. Workstations - 12 to 24.

SECRET

27 April 1981

STAT

MEMORANDUM FOR:

FROM:

SG/ADB/AO

SUBJECT: Market Survey of Tempest Approved
             Office Information Systems

1.   A market survey was conducted during March 1981 to
determine the availability of Word Processing or Office
Information Systems with Tempest Certification. This survey
was intended to determine what, if any, systems are on the
market which meet the specifications for both field and
Headquarters installations as determined by the project design
teams.

2.   The criteria for evaluation included only the basic
requirements in the following categories:

    . Environmental
    . Hardware
    . Software
    . Communications

The results of the survey concluded that, at this time, there
are no vendors that can meet all of the design specifications
on an available-for-delivery basis.

3.   Following is a synopsis of what is on the market now
as well as those systems which are scheduled for Tempest
Certification testing in the immediate future.

    a.   Systems Currently Holding Tempest Certification

        . CPT 8000T w/printer
        . Delta Data 2768T
        . DEC VT100-X
        . Lexitron VT1202T/1303T/1000T
        . NBI 3000
        . Wang WP-20/25/30
        . Xerox 860T

    b.   Systems Undergoing Tempest Testing

        . Burroughs RIII Series
        . IBM Display Writer
        . Lanier

Next 6 Page(s) In Document Exempt